SECTION 1 - INTRODUCTION

1.1   Purpose of Guideline

This implementation guideline is provided by the Environmental Protection Agency (herein referred to as EPA, or the Agency). It presents an overview of the EPA and Electronic Data Interchange (EDI). EDI is the transmission, in American National Standards Institute, Accredited Standards Committee X12 (ANSI ASC X12) standard syntax, of unambiguous information of business or strategic significance between computers of independent organizations. Other acceptable identifications of this standard are ASC X12, ANSI X12, or X12.

1.2   Scope and Applicability

This Implementation Guideline is intended to provide prospective EDI Trading Partners, both internal and external to the EPA, with the information necessary to understand the EDI goals of the EPA; an overview of the current EDI projects; and the references to the individual Program Office publications. The individual publications for each Program Office contain the specifics for conducting business with the EPA using EDI and the necessary cross references to this document.

1.2.1   Project Overview

The EPA is actively supporting the use of EDI using the X12 Standards in the following business areas. The individual implementation guidelines contain a more detailed explanation of the application.

Permit Compliance System (PCS) is an integral part of EPA's National Pollutant Discharge Elimination System (NPDES). PCS is one of EPA's largest computerized information systems, with approximately 12 million individual records in its data base. PCS serves six major purposes in support of EPA Headquarters, EPA Regions, and States in planning and implementing the NPDES program. This program uses the X12 Transaction Set 863 Report of Test Results to communicate Discharge Monitoring Report information as the reporting vehicle. Please refer to the DMR EDI Implementation Guidlines.

Hazardous Waste Manifest (HWM) system, as mandated by the Resource Conservation and Recovery Act (RCRA), was designed to track hazardous waste shipments from the point of generation to the point of disposal. The manifest provides information that is crucial to Federal and State implementation of RCRA. States use HWM data to prepare or verify EPA reports like the Biennial Report and to meet Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) capacity assurance requirements. States use the data for specific purposes such as enforcing regulations,

generating hazardous waste fees, identifying potentially responsible parties for Superfund site cleanups, meeting state reporting and management requirements, answering public inquiries and sharing information with other states. EPA headquarters and regions also depend on the data for verifying the hazardous waste handler universe. The U.S. EPA National Environmental Investigation Center (NEIC) uses HWM data to track the export of hazardous waste. This program uses the X12 Transaction Set 856 Ship Notice/Manifest as the reporting vehicle. Please refer to the HWM EDI Implementation Guideline.

Trans-border Hazardous Waste Manifest (TRANSHAZ) program is a variant of the Hazardous Waste Manifest program described above. It is designed for tracking hazardous waste shipments from "Maquiladora" facilities in Mexico to the United States for treatment, storage or disposal. It involves interaction among the U.S. Customs, the Government of Mexico, the state of Texas, the U.S. EPA and the subsidiaries of U.S. companies located along the U.S. -Mexico border, referred to as "Maquiladora". The system will use the X12 Transaction Sets 856 Ship Notice/Manifest and the 824 Application Advice as the reporting vehicle. Additional transaction sets will be used as needed. Please refer to the TRANSHAZ EDI Implementation Guideline.

Air Emission Statement (AES) is a report of discharges into the air from stationary sources. Recent amendments to the Federal Clean Air Act mandate extensive reporting of discharges into the air from stationary sources such as power plants, refineries, and industrial plants. These sources of air emissions must provide data to State air quality agencies that monitor compliance with air quality targets. The X12 Transaction Set 841 Specifications/Technical Information is to be the reporting vehicle. Please refer to the AES EDI Implementation Guidelines.

Reformulated Gasoline Program and Anti-Dumping Program (RFG) results from the Clean Air Act Amendments of 1990 that required the phase-in of reformulated gasolines for use in the nine worse ozone non-attainment areas by 1995. Other ozone nonattainment areas may be included in the program at the request of the state's governor. The regulations governing the program are located at CFR Part 80, Subparts D, E, and F, and identify the information required to be reported by refiners, gasoline importers, oxygenate blenders and independent laboratories. This program uses the X12 Transaction Sets 863 Report of Test Results and the 867 Product Transfer and Resale as the reporting vehicles. Please refer to the RFG EDI Implementation Guideline.

Biennial Reporting System (BRS) mandated by the Resource Conservation, and Recovery Act (RCRA) statue requires states to report to the EPA, every two years the volumes and composition of hazardous waste treated, stored, or disposed within their borders, chiefly to determine compliance with Capacity Assurance Plans (CAP). The CAPS are developed by the states and approved by the EPA to ensure that States have sufficient capacity available to manage expected volumes of hazardous waste that must

be stored, treated, or disposed within each state. This program uses the X12 Transaction Sets 863 Report of Test Results and the 841 Specifications/Technical Information as the reporting vehicles. Please refer to the BRS EDI Implementation Guideline.

Integrated Contract Management System (ICMS) is designed to automate, integrate, and track all aspects of procurement and contract management functions. ICMS is a major component of the Integrated Administrative System (IAS) under the Administrative Systems Division (ASD). ICMS and related contract management systems are fully automated procurement and contract management systems integrated with a financial management system.

The procurement business uses the X12 Transaction Sets 810 Invoice, 820 Payment Order/Remittance Advice, 824 Application Advice, 850 Purchase Order, 855 Purchase Order Acknowledgment, 860 Purchase Order Change Request - Buyer Initiated, 864 Text Message, and the 865 Purchase Order Change Acknowledgment/Request - Seller Initiated. Please refer to the ICMS EDI Implementation Guideline.

1.2.2   EPA EDI Objectives

An objective of EPA's EDI Program is to use EDI to provide economies in exchanging information with external partners. The U.S. EPA has developed an approach to EDI that will benefit all participants or Trading Partners - the regulated community, the State environmental program offices, and service and product suppliers. This approach includes:

C   Implementing EDI using ANSI ASC X12 standards;

C   Using existing transaction sets and developing EPA-specific convention documents;

C   Developing national standards for the implementation of environmental reporting;

C   Avoiding the development and proliferation of proprietary software, standards, procedures and conventions; and

C   Seeking voluntary collaboration with the regulated community, contractors and vendors.

Electronic Reporting

The U.S. Government Policy on EDI, as published in the Federal Information Processing Standard (FIPS PUB 161) became effective on September 30, 1991. Its objectives are to:

    C   Have Federal Agencies achieve the benefits of EDI, (e.g., reduced paperwork, fewer transcription errors, faster response time for procurement and customer needs, reduced inventory requirements, more timely payment of vendors);

    C   Ease the electronic exchange of data by the use of standards for data formats and transmission envelopes; and

    C   Minimize the cost of EDI implementation by preventing duplication of effort.

The transmission of reports using EDI is consistent with the Agency's electronic reporting (ER) policy. Notice of EPA policy was published in the Federal Register, Notice No. FRL-3815-4, Volume 55, Number 146, July 30, 1990 and was entitled "EPA's Policy on Electronic Reporting." This policy establishes a uniform EPA approach to electronic reporting. In addition, this policy is intended to promote the adoption of electronic reporting by EPA Program Offices and to ensure that as they implement this technology, they do so in a manner that is both consistent across the Agency and compatible with the current electronic reporting practices in industry.

EDI and ASC X12 Standards

The American National Standards Institute (ANSI) was founded in 1918 as the national coordinator of the voluntary standards system for the United States. The system meets national standards needs by marshalling the competence and cooperation of commerce and industry, standards developing organizations, and public and consumer interests. ANSI coordinates the voluntary development of national consensus standards, approves standards as American National Standards, and serves as a clearinghouse and information center for American National Standards and international standards.

In 1979 ANSI chartered a new committee, known as Accredited Standards Committee (ASC) X12, Electronic Data Interchange, to develop uniform standards for electronic interchange of business transactions. This charter permits the adoption of national standards for EDI and enables all organizations to use a single agency (ASC X12) to develop and maintain transaction set standards.

ASC X12 develops Draft Standards for Trial Use (DSTU's) and publishes the entire set as a Release annually. The purpose of the Release is to put current approved draft standards into the hands of users on a more frequent schedule, to speed implementation, reflect user needs in the standards more quickly and allow the user to gain experience with the draft standards before solidifying them as American National Standards. Draft Standards for Trial Use undergo the ANSI-required public review process approximately every three to five years. ANSI-approved, published standards, including ASC X12 Draft Standards for Trial Use (DSTU's), as of May 1994 number 198 with an additional 102 draft standards that are under review. In developing the ASC X12 series of American national standards,

the ASC X12 subcommittees seek to minimize the need for users to reprogram their internal data processing systems to achieve an interchange. Consequently, the standards are structured so that computer programs can translate data from internal to external formats and vice-versa. In this way, either through internally or externally developed translation software and public-communications vendors, all sizes of firms and institutions using intelligent computational devices may benefit from the use of the standard. Through the use of this standard, all institutions can enjoy the efficiencies of a common interchange language rather than experience the difficulties of a proliferation of methods and procedures, which could occur if each institution were to impose its own formats on every other institution with which it does business.

1.3   Responsible Entity

EDI is a partnership that involves several individuals or functional groups within each organization. EDI is also a new way for the government to conduct business. For EDI to be successful, all who are involved must work together in an open and informed environment.

The **Trading Partne**r (e.g., a governmental agency, a waste generator, a TSD facility, a municipality, a corporate entity, etc) is responsible for successfully communicating data to the EPA. Communicating data includes acquiring the data, presenting it to a translator for conversion to the X12 Standard and transmitting it via a prescribed route. Each Trading Partner is also responsible for acquiring required software and hardware and for problem resolution with the EPA. The EPA is responsible for providing the necessary Implementation Guidelines and testing assistance during the initial implementation to ensure successful delivery of the data.

An EDI project requires the services of individuals schooled in both EDI and the applications that handle the data. For the purposes of identifying various functions involved this publication has assigned the following titles and identified functions with those titles: Program Officer, EDI Coordinator, EDI Application Programmer and Telecommunication Coordinator. A successful EDI implementation is dependent upon having the responsibility of the functions assigned, not the titles.

Program Officer is responsible for the business area interface and for ensuring that each project participant is in compliance with the program regulations.

EDI Coordinator is responsible for the application program that uses the EDI data and for all problems at the application level including EDI documentation (e.g., wrong field, wrong data in field, missing fields, etc.). The Coordinator works closely with the EDI Application Programmer and may assume some of the Program Officer duties.

EDI Application Programmer is responsible for developing the interface program that bridges Trading Partner applications to the EPA EDI system. The Application Programmer is also responsible for all modifications and enhancements to the EDI

system. This includes problem resolution from the Trading Partner translator software to the EPA's mailbox and from the mailbox to the EPA's EDI Program Office system.

Telecommunications Coordinator is responsible for ensuring that the services provided under the Value Added Network (VAN) are compatible with the EPA's EDI requirements.

1.4   Introduction to EDI

EDI is the transmission in ANSI ASC X12 syntax, of unambiguous information of business or strategic significance between computers of independent organizations. The definition can be expanded further to include the electronic transmission of business documents from the application program of one computer to the application program of another computer within the framework of a standard format. The key elements in the definition are computer-to-computer and standard format. EDI reduces costs and errors associated with a paper document environment. EDI replaces the mail delivery and reentry of documents with the electronic mailbox and the delivery of business data directly to your computer application program.

1.5   How to Use the Implementation Guideline

These guidelines follow the ASC X12 recommended format specified in the "ASC X12 Guideline for Electronic Data Interchange EDI Implementation Reference Guidelines", approved February 1991, ASC X12 D/90-856. Chapters 1-10 contain information necessary for the EPA and its Trading Partners to fulfill the requirements for implementing the exchange of information utilizing EDI. These sections include the EDI business background and history, EPA policy and logistic issues, and a checklist on how to get started with EDI for Trading Partners and EPA Program Offices. Appendices, found only in the individual EPA implementation guidelines, contain the usage conventions of the specific X12 transaction sets to satisfy the information requirements of the EPA.

1.6   References

Questions, comments, and suggestions regarding this EPA EDI Implementation Guideline may be referred to:

> **Chief of Information Policy Branch**
> Office of Policy, Planning and Evaluation
> U. S. Environmental Protection Agency
> 401 M Street S. W.
> Washington, DC 20460
> (202) 260-2706

Standards publications, guidelines and technical reports disseminate the technical and logical concepts reflected in the X12 Standards. DISA (*Data Interchange Standards Association*) publishes a catalog of the available standards. *Part I* is a document titled

"An Introduction to Electronic Data Interchange". *Part II* is the catalog of the ASC X12 Publications.

General or Technical questions about Electronic Data Interchange, ASC X12, ASC X12 Standards and Updates, international standards, or DISA can be directed to:

> **Data Interchange Standards Association, Inc (DISA)**
> Technical Department
> 1800 Diagonal Road, Suite 200
> Alexandria VA 22314-2852
> Fax: (703) 548-5738

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